

ABCs of DNA

HELPING PATRONS UNRAVEL THE MYSTERY OF GENETIC INFORMATION

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U.S. National Library of Medicine

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Genetics in the News

CRISPR Gene-Editing May Offer Path
To Cure For HIV, First Published Report
Shows

As Made-To-Order DNA Gets Cheaper,
Keeping It Out Of The Wrong Hands Gets
Harder

Opioids: Can a Genetic Test
Identify an Addict in the
Making?

CRISPR Gene Editing Is Being
Tested in Human Patients, and the
Results Could Revolutionize Health
Care

Afraid of Needles? You May
Want to Blame Your Genes

No 'gay gene': Massive study homes in on genetic
basis of human sexuality

Signing up for 23andMe? You might be exposing your
family to the FBI

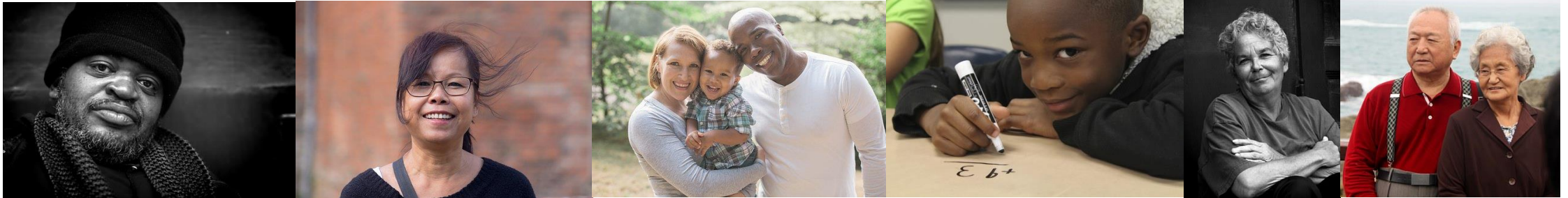
Millions of Americans Could Be Identified
Using Consumer Genetic Databases—Even If
They've Never Taken a DNA Test

Birth of Baby With Three Parents' DNA Marks Success for Banned Technique



Genomic Health Literacy

- Lack biology basics
- Lack mathematical concepts
- Lower literacy



Leading causes of death

1. Heart disease: 647,457
2. Cancer: 599,108
3. Accidents (unintentional injuries): 169,936
4. Chronic lower respiratory diseases: 160,201
5. Stroke (cerebrovascular diseases): 146,383
6. Alzheimer's disease: 121,404
7. Diabetes: 83,564
8. Influenza and pneumonia: 55,672
9. Nephritis, nephrotic syndrome, and nephrosis: 50,633
10. Intentional self-harm (suicide): 47,173

[CDC FastStats](#)

Jean's Genetic Testing Timeline

- **Age 1 day:** **newborn** testing for a few serious childhood diseases
- **Age 30:** **carrier** testing (with their partner) before getting pregnant
- **Age 35:** **predictive testing** when sibling develops breast cancer at a young age
- **Age 45** **direct to consumer** genetic testing to investigate ancestry
- **Age 65** **pharmacogenomics** testing when medication wasn't effective




Direct to Consumer Testing




Testing for...




Achieve
your full potential.



Increase
your athletic performance.



Harness
your natural ability through
personalized genomics.



www.GenomicExpress.com

Pheramor



Questions to ask before using a Direct to Consumer Genetic Test

- Is the test right for me?
- What are the company claims?
- What do I hope to find out?
- Am I ready to hear something unexpected?
- Who will the results affect besides me?
- What happens to my genetic information?



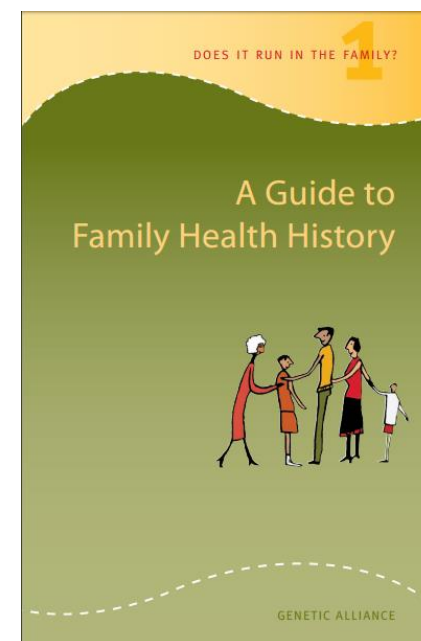
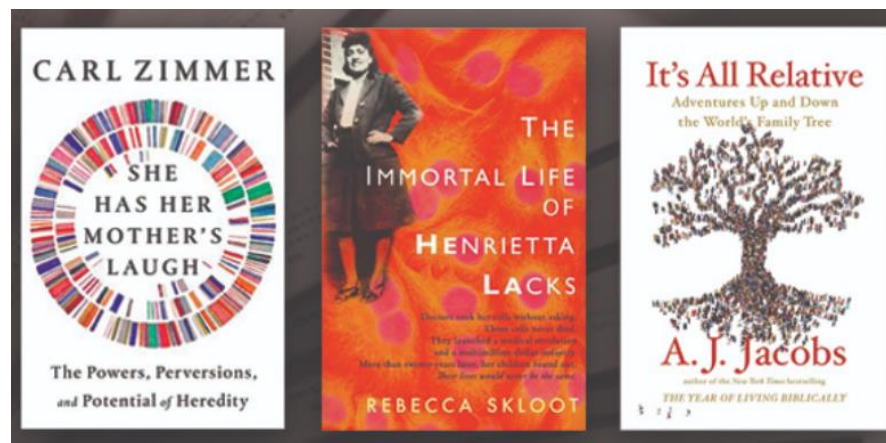
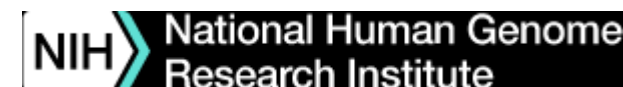
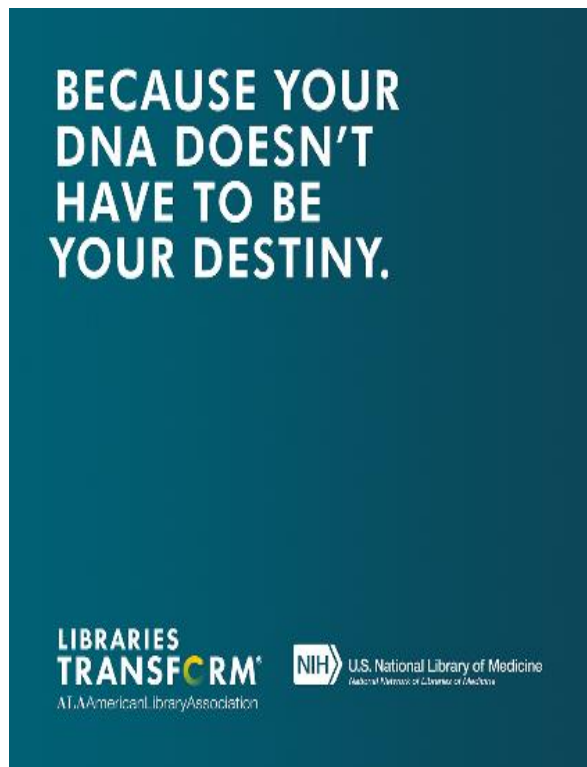
[Think Before You Spit – CDC](#)

Societal Concerns

- Genetic discrimination
- Health disparities
- Intellectual property
- Privacy and Security
- Regulation of genetic tests
- Human enhancement



Libraries and genetic health information





UNRAVELING THE MYSTERY OF GENETICS INFORMATION FOR CONSUMERS

October 19 – November 15

Register: <https://nnlm.gov/classes/abcs-dna>

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